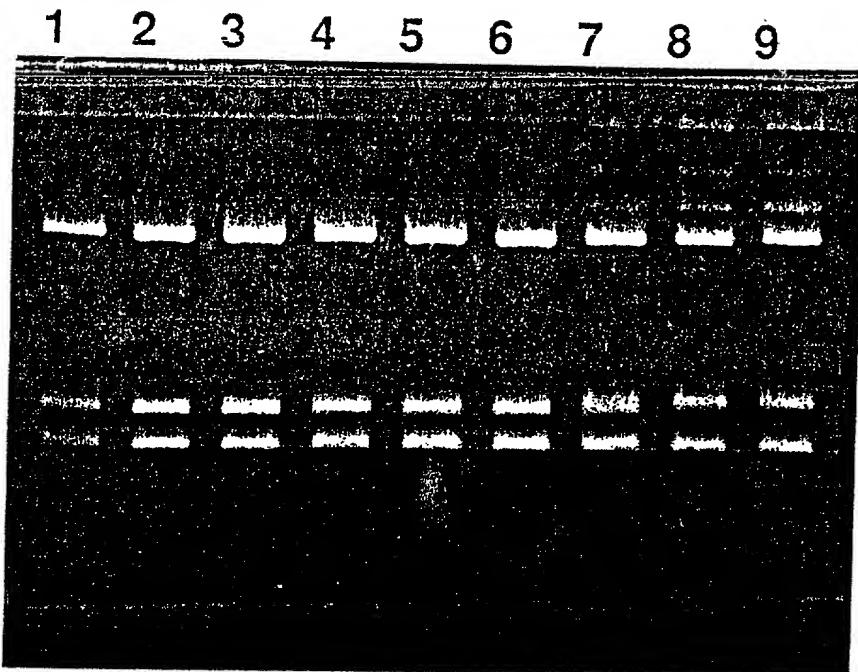
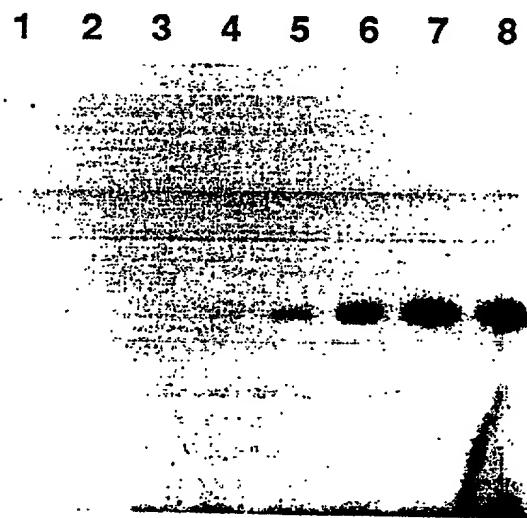


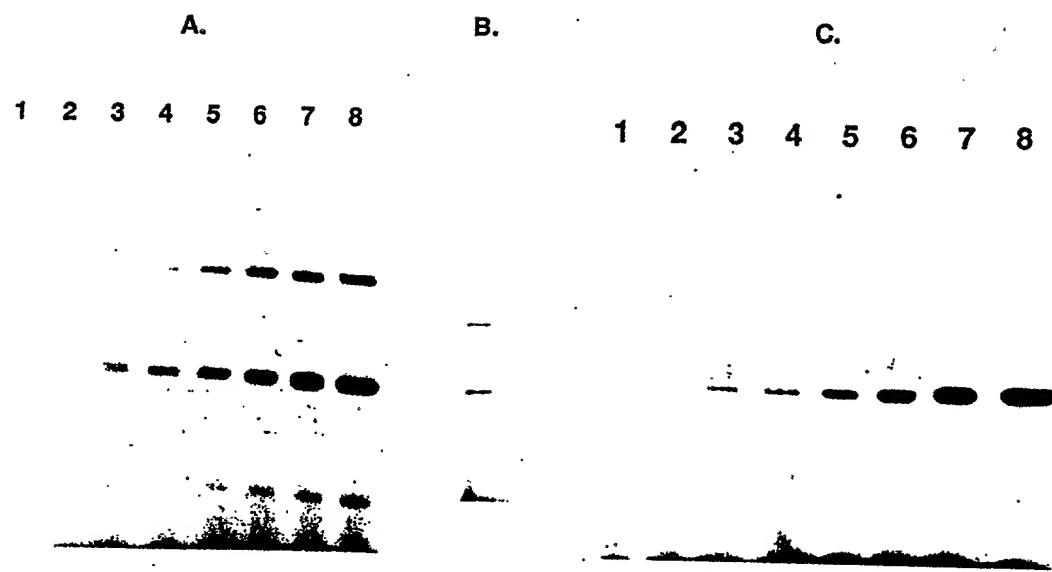
**FIGURE 1:** (A) Restriction map of pALA-D. R = RsaI, P = PstI. Fragments A – D are labeled above the line, with the nucleotide lengths indicated beneath. There is a single Smal site in fragment D. (B) Branch migration of displacer (open rectangle), bound to linker (filled rectangle), into a recipient duplex with a four base 3'-overhang (PstI end of fragment B). Shown below is the conversion between the displacer-linker duplex bound to the 3' overhang only (left) and following complete branch migration (right). (C) Maximum displacement with specific pALA-D fragments. m = the maximum number of base pairs which can be formed between the displacer, and the complementary recipient strand.



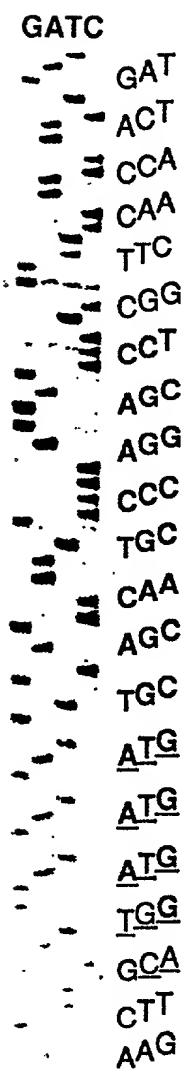
**FIGURE 2:** Capture reaction of P-D-BrdC plus P-L-dC. UV fluorogram of 1% agarose gel. Lane 1: RsaI/PstI digested pALA-D (200ng). A, B, C, and D refer to fragments shown in Fig. 1. Lanes 2-9: products following ligation in the presence of P-D-BrdC (6  $\mu$ g/ml), P-L-dC (2  $\mu$ g/ml), and 5 U/ml ligase for 1, 2, 4, 8, 16, 32, 64, and 128 min, respectively.



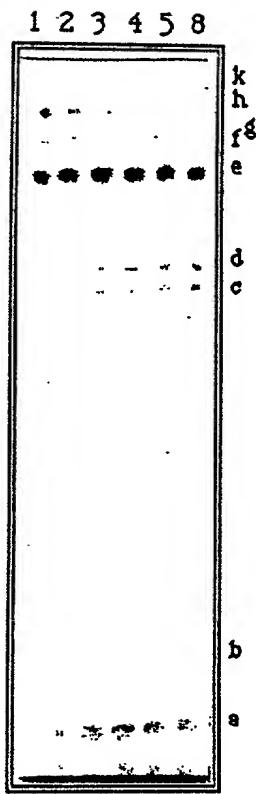
**FIGURE 3:** Autoradiogram of Fig. 2. Lanes 1-8 correspond to the radiolabeled lanes 2-9 of Fig. 2.



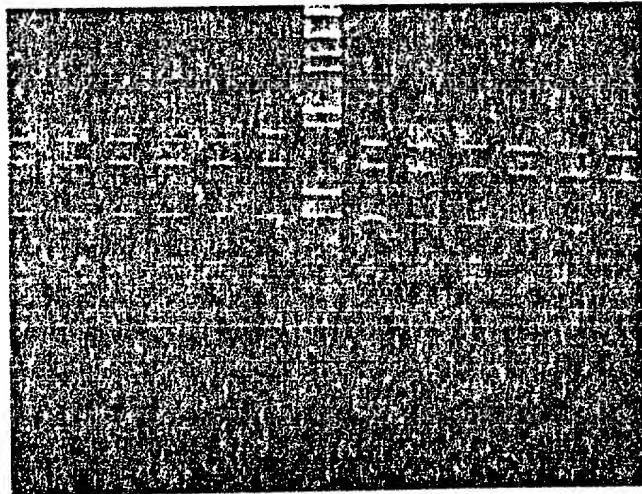
**FIGURE 4:** (A) Autoradiogram similar to Fig. 3, but with higher ligase concentration and P-D-dC replacing P-D-BrdC. (B) An early time point in an autoadiogram identical to Fig. 3 except using P-D-BrdC-E(10) replacing P-D-BrdC. (C) Autoradiogram identical to Fig. 3 except using P-D-BrdC-E(24) replacing P-D-BrdC.



**FIGURE 5:** Cloning. Autoradiogram of sequencing gel showing the region of incorporated displacer (bold) and linker (underlined) sequences.



**FIGURE 6:** Partial Digest Mapping. BCR using pALAD-G4, a derivative of pMS19 containing a genomic fragment of human ALAD, and displacer-linker duplex S-D-BrdC and S-L-dC was followed by partial digestion with Sau3A1. Lanes 1, 2, 3, 4, 5 and 8: partial digestion products formed at 1, 2, 3, 4, 5 and 8 minutes, respectively. Bands a-k are partial digest bands of the sizes expected: 300, 406, 1538, 1598, 2706, 2731, 2748, 3198, and multiple large bands produced by sites within the vector, respectively.



**FIGURE 7:** Triplex enhanced branch-migration mediated linker capture. Lanes 1-6: pMS19, cut with NcI and Sall, incubated with BT-D-MedC-1, BT-L-dC-1 and T4 DNA ligase as described in the text, for 0, 1, 3, 10, 30 and 120 min. Lane 7: Molecular weight markers of lambda DNA cut with Avall. Lanes 8-13: pMS19, cut with NcI and Sall, incubated with B0-D-MedC-1, BT-L-dC-1 and T4 DNA ligase as described in the text, for 0, 1, 3, 10, 30 and 120 min.